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# Interview with Rob Thoresen

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Rob Thoresen

## INTERVIEW WITH ROB THORESEN

### Welding Technology Department Chair

Rob Thoresen is the Chair of the Welding Technology Department at Cuesta College. [www.cuesta.edu/deptinfo/engtech/weld.htm](http://www.cuesta.edu/deptinfo/engtech/weld.htm)

*Moebius: Tell us about your teaching history. How long have you been teaching, what level, and where?*

**RT:** I have been teaching for seventeen years, fourteen of those at the high school level, and the past three at Cuesta College. My first four years were spent teaching Agricultural Education at Morro Bay High School, and the next ten were at Paso Robles High School. I taught several subjects within those agricultural programs, including landscaping, student government, commercial fishing, biology, and animal science. At Paso High, I taught welding full time with the addition of one animal science course. Three years ago I began work at Cuesta College as the chair of the Welding Technology Department.

*Moebius: What does your job as chair of the Welding Technology Department entail?*

**RT:** The first priority is to serve the students as a qualified welding technology instructor. I teach my students the trade: both the technical and manipulative aspects of welding. It is important that I stay current with industry trends, including the advancement of welding technology and practical application. At the beginning of this assignment, I sought training and obtained credentials as a Certified Welding Inspector and Certified Welding Educator through the American Welding Society. Secondly, I manage the overall welding program, which includes the main campus in San Luis Obispo, as well as our North County facility. Program management involves developing curriculum, determining course offerings, overseeing equipment and facilities, as well as organizing the part time instructor pool. We've had a 30 percent increase in student enrollment over the last two-and-a-half years, which is excellent growth, and which is accompanied by increased responsibility. We offer eleven to fifteen sections per semester, which requires the coordination of six to seven instructors for adequate class coverage. We have excellent industry representation in our part-time instructor pool as well as on our Advisory Committee.

Another major responsibility is recruitment. We employ many strategies to attract students, the keystone of which is a statewide welding contest that we host on campus.

This contest brings FFA<sup>1</sup> members and teachers from all around California to our campus, which gives Cuesta excellent exposure. We hosted the competition last year for the first time, and we will host it this year as well. We also visit high schools, both in an informal role on advisory committees and also in formal guest visits. Additionally, Cuesta holds an annual Tech Fair in which we always participate.

*Moebius: Can you expand on what it takes to manage the welding shop itself?*

RT: We have twenty welding stations, all equipped with four major processes: stick, wire processes (which includes MIG and flux core arc), and TIG. We also have metal-working tools, such as sheers, mills, lathes, grinders, drill presses, and a tool room for hand tools. My first concern is to make sure all of the equipment is up-to-date, operational and safe. Managing the physical plant layout to allow for a safe, logical flow of materials and students is also very important. The consumable aspect is a big responsibility as well. Consumables include gas, wire, stick electrodes, metal stock, and much more. To give you an idea of the volume of consumables we manage, we burn an average of 8,000 to 11,000 pounds of stick electrodes over the course of a school year.

*Moebius: Given your teaching experience, when you hear the phrase “the dumbing down of America,” what is the first thing that comes to your mind?*

RT: I have a mixed reaction, in terms of whether it’s an accurate statement or not. Sometimes, we focus on too small a scale: one class, one teacher, one school, one industry, or basically smaller symptoms of a bigger issue. I’m more concerned that our young people are not being adequately exposed to the career opportunities that are available to them. Granted, we have career technical education and excellent vocational education models in agriculture and industrial arts. What I am referring to is a bit different and involves a major K-12 curriculum course centered on teaching students about the vast career opportunities that are driving the economic force of our country. This curriculum should address questions like: What are the different career roles in America? How much might I make doing a particular job? What type of training will this career require? What does a typical day, week, or year look like? Will my income be in alignment with my life goals? I wish we could say to a junior high student “what do you want to be?” and know that he or she has some logical frame of reference from which to make a response, beyond the scope of his or her parents’ careers. This curriculum could include regular classroom curriculum, guest speakers, industry field trips, work site visits, and apprentice or internship experiences.

*Moebius: Do you see any “dumbing down” happening specifically in education?*

RT: I don’t think we can make a quick generalization to say that we are dumbing down. The bigger issue is whether we are truly connecting with students and making academics relevant by applying that knowledge to their pending careers. Agricultural

Education Regional Supervisor, Paul Stark, once told me that teachers need to have a gigantic key ring with thousands of keys, and the teacher's task is to figure out which key will unlock the potential of each individual student. The role of the teacher has shifted. We aren't just imparting knowledge anymore because there is so much to know. We need to teach students how to find, filter, and use the widely available information pertinent to their fields. They will perform best when they have some reason to care about what is being presented. Students are intelligent and willing. They will travel as far as you will take them, in any subject, if you can capture their interest.

Focusing our energies on preparing all students for a four-year degree is helping only about one third of our needs in the workforce. With only approximately 25 to 30 percent of high school graduates moving on to four-year institutions, when we focus all of our energy on such a narrow population, we neglect the wide scope of individuals required to make our communities function. Policy and educational reform are focused on too few. Instruction needs to be diverse to meet different student needs and the different needs of industry.

*Moebius: Earlier you mentioned that the welding program has grown by 30 percent over the last two and a half years. What has caused this expansion?*


RT: There are many different factors. Cuesta has a high-quality welding program. We have added new courses, such as Metallurgy, Welding Power, and Blueprint Reading. We've upgraded our equipment, we work with industry representatives to tailor our program, and we have an excellent instructor pool. We have nine part-time instructors from the welding industry who teach with us. Our students are taught by true professionals.

Additionally, there is increased student interest in the trades, and in welding specifically. I am not sure why this is, but maybe their recreational interests have something to do with it, like mechanical interest in cars and dirt bikes. Some are tactile learners who enjoy working with their hands, and they realize they can have a viable career. Media probably contributes as well, with various shop programs on the airways. Some see opportunity for an excellent career outside of a four-year degree, and rightly so. The Bureau of Labor Statistics predicts that by 2010 there will be approximately 250,000 additional available welding and welding-related careers.

*Moebius: What is your vision for the future of the welding department?*

RT: Program expansion has been, and will continue to be, a huge focus. Currently, Paso Robles High School hosts our North County classes, and we hope to build a new Cuesta College shop at our North County campus sometime around 2010 or 2011. We are also looking to expand our courses to South County at another satellite facility. We strive to further evolve the program to meet industry needs as they change. For example, we are resurrecting our Pipe Welding class based on industry request, and we are writing

a new class called Math for Welders, which teaches the math skills that apply to welding. Why do we need this class? Industry came to us and said that students need stronger math skills related to welding. This might bring to question, is this needed because the schools didn't teach the math or because we didn't connect the math to something relevant for the student? We want to use the students' interests in subjects like welding to help them learn the academics that support their interest area.

I envision career education where students know what jobs are out there, how to get there, and what happens when you get there, so our society can be furnished with well-educated workers in all fields who are truly working where their interest lies. There are many schools, educators, and administrators working hard to offer the highest quality education to our students. I hope that we might see an educational reform plan that will focus on an entire cross-section of society and truly address the diverse needs of our country. 

## Notes

1. FFA is the Future Farmers of America, a national agricultural education program for middle and high school students.

*Interview on behalf of Moebius conducted by Helen Knight, Winter 2008.*